crush plates are no smaller than 165 mm by 165 mm (6.5 in × 6.5 in). The engaging surfaces of the crush plates have a roughness approximately equivalent to 60 grit sandpaper. The bottom crush plate is marked to ensure that the applied load is centered on the sample.

(2) The crush plate assemblies have an average angular rigidity (about axes normal to the direction of crush) of at least 1017 Nm/deg (750 ft-lb/deg), over the range of 0 to 203 Nm (0 to 150 ft-lb) applied torque.

§ 587.16 Adhesive bonding procedure.

Immediately before bonding, aluminum sheet surfaces to be bonded are thoroughly cleaned using a suitable solvent, such as 1-1-1 Trichloroethane. This is carried out at least twice and more often if required to eliminate grease or dirt deposits. The cleaned surfaces are abraded using 120 grit abrasive paper. Metallic/silicon carbide abrasive paper is not to be used. The surfaces are thoroughly abraded and the abrasive paper changed regularly during the process to avoid clogging, which could lead to a polishing effect. Following abrading, the surfaces are thoroughly cleaned again, as above. In total, the surfaces are solvent-cleaned at least four times. All dust and deposits left as a result of the abrading process are removed, as these can adversely affect bonding. The adhesive is applied to one surface only, using a ribbed rubber roller. In cases where honeycomb is to be bonded to aluminum sheet, the adhesive is applied to the aluminum sheet only. A maximum pressure of 0.5 kg/m^2 (11.9 lb/ft^2) is applied evenly over the surface, giving a maximum film thickness of 0.5 mm (0.02 in).

§ 587.17 Construction.

(a) The main honeycomb block is bonded to the backing sheet with adhesive such that the cell axes are perpendicular to the sheet. The cladding sheet is adhesively bonded to the front surface of the main honeycomb block. The top and bottom surfaces of the cladding sheet are not bonded to the main honeycomb block but are positioned close to it. The cladding sheet is adhesively bonded to the backing sheet at the mounting flanges. The bumper element honeycomb is adhesively bonded to the front of the cladding sheet such that the cell axes are perpendicular to the sheet. The bottom of the bumper element honeycomb is flush with the bottom surface of the cladding sheet. The bumper facing sheet is adhesively bonded to the front of the bumper element honeycomb.

(b) The bumper element honeycomb is divided into three equal sections by means of two horizontal slots. These slots are cut through the entire depth of the bumper element and extend the whole width of the bumper. The slots are cut using a saw; their width is the width of the blade used which do not exceed 4.0 mm (0.16 in).

(c) Clearance holes for mounting the deformable face are drilled in the cladding sheet mounting flanges (shown in Figure 5). The holes are 20 mm (0.79 in) in diameter. Five holes are drilled in the top flange at a distance of 40 mm (1.57 in) from the top edge of the flange and five holes in the bottom flange at a distance of 40 mm (1.6 in) from the bottom edge of the flange. The holes are spaced at 100 mm (3.9 in), 300 mm (11.8 in), 500 mm (19.7 in), 700 mm (27.5 in), 900 mm (35.4 in) horizontally, from either edge of the barrier. All holes are drilled within ±1 mm (0.04 in) of the nominal distances.

§ 587.18 Dimensions of fixed rigid barrier.

(a) The fixed rigid barrier has a mass of not less than 7×10^4 kg (154,324 lb).

(b) The height of the fixed rigid barrier is at least as high as the highest point on the vehicle at the intersection of the vertical transverse plane tangent to the forwardmost point of both front tires, when the tires are parallel to the longitudinal centerline of the vehicle, and the vertical plane through the longitudinal centerline of the vehicle.

§ 587.19 Mounting.

(a) The deformable face is rigidly attached to the edge of the fixed rigid barrier or to some rigid structure attached thereto. The front of the fixed rigid barrier to which the deformable face is attached is flat (continuous over the height and width of the face and vertical ±1 degree and perpendicular ±1

degree to the axis of the run-up track). The edge of the deformable face is aligned with the edge of the fixed rigid barrier appropriate for the side of the vehicle to be tested.

(b) The deformable face is attached to the fixed rigid barrier by means of ten bolts, five in the top mounting flange and five in the bottom, such that the bottom of the bumper element honeycomb is 200 mm (7.8 in) ±15 mm (0.6 in) from the ground. These bolts are at least 8 mm (0.3 in) in diameter. Steel clamping strips are used for both the top and bottom mounting flanges (Figure 1). These strips are 60 mm (2.4 in) high and 1000 mm (39.4 in) wide and have thickness of at least 3 mm (0.12 in). Five clearance holes of 20 mm (0.8 in) diameter are drilled in both strips to correspond with those in the mounting flange on the deformable face cladding sheet (see §586.17(c)).

FIGURES TO SUBPART C OF PART 587

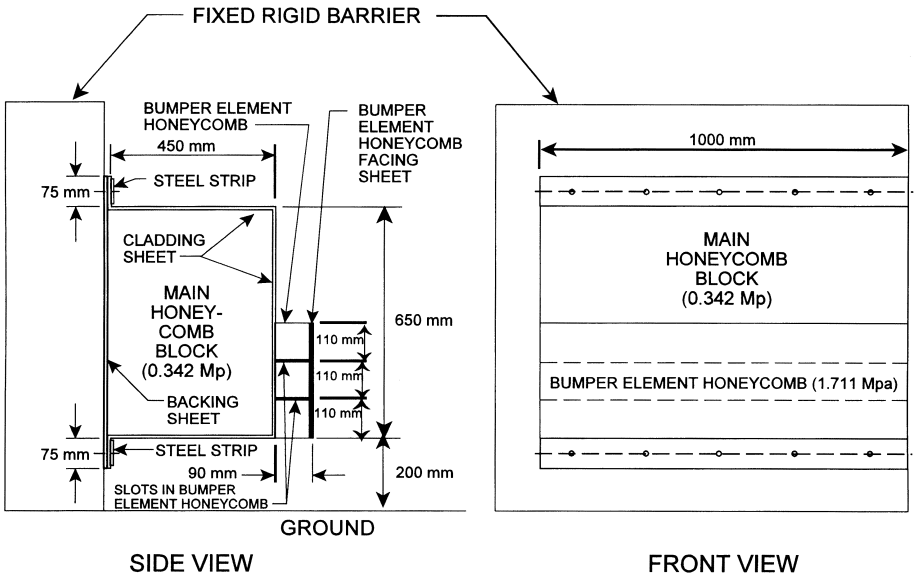
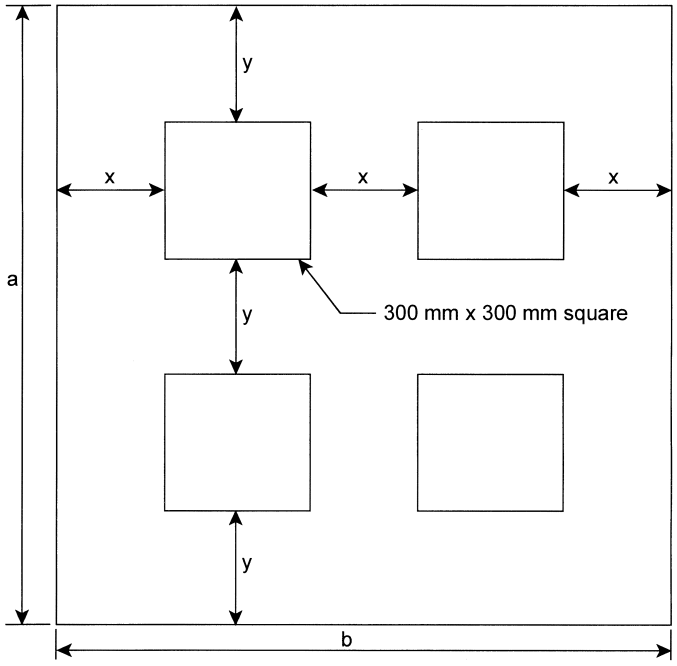
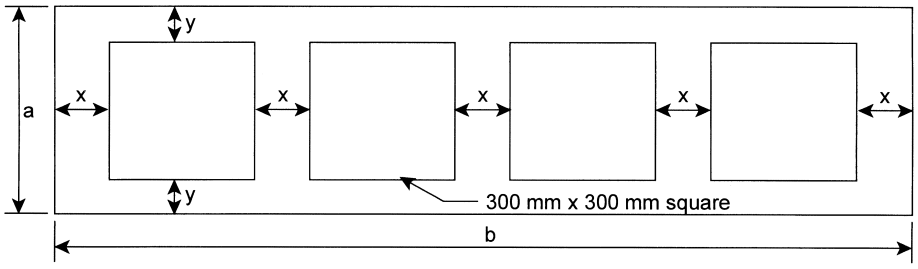


FIGURE 1
OFFSET BARRIER



If a ≥ 900 mm: x = 1/3 (b - 600) mm and y = 1/3 (a - 600) mm (for a < b)



If a < 900 mm: x = 1/5 (b - 1200) mm and y = 1/2 (a - 300) mm (for a ≤ b)

FIGURE 2

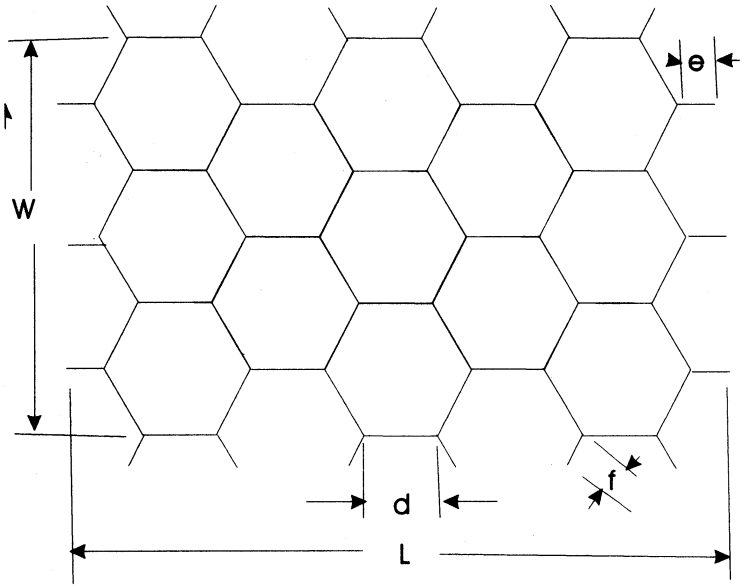


Figure 3
Honeycomb Axes and Measured Dimensions

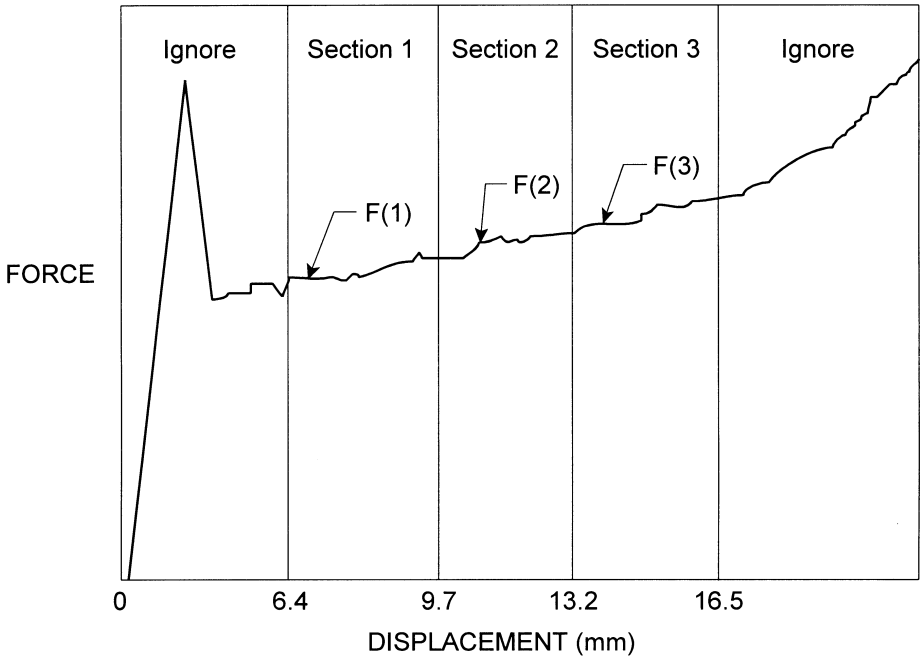


FIGURE 4
CRUSH FORCE AND DISPLACEMENT

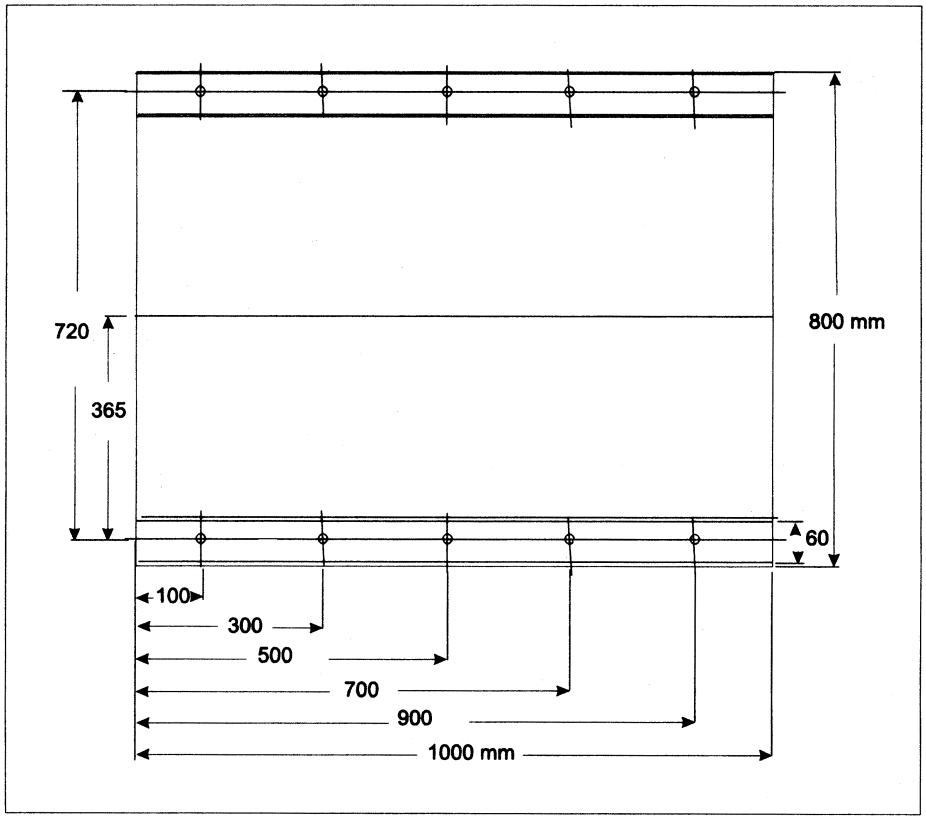


Figure 5
Positions of Holes for Deformable Face Mounting

PART 588—CHILD RESTRAINT SYSTEMS RECORDKEEPING REQUIREMENTS

Secs.
588.1 Scope.
588.2 Purpose.
588.3 Applicability.
588.4 Definitions.
588.5 Records.
588.6 Record retention.

AUTHORITY: 49 U.S.C. 322, 30111, 30115, 30117, and 30166; delegation of authority at 49 CFR 1.50.

SOURCE: 57 FR 41438, Sept. 10, 1992, unless otherwise noted.

§588.1 Scope.

This part establishes requirements for manufacturers of child restraint systems to maintain lists of the names and addresses of child restraint owners.

§588.2 Purpose.

The purpose of this part is to aid manufacturers in contacting the owners of child restraints during notification campaigns conducted in accordance with 49 CFR part 577, and to aid the National Highway Traffic Safety Administration in determining whether a manufacturer has met its recall responsibilities.